REMARKS

In the Official Action, the Examiner raised a rejection under the second paragraph of 35 U.S.C. §112 and rejected various groups of all the claims over the prior art. By the present Amendment, editorial revisions have been made throughout the specification, claim 1 has been amended to define certain aspects of the present invention with greatly precision and new claims 8-14 have been added to relate to a further aspect of the present invention wherein the method specifies a positive-working photosensitive layer or positive-working thermosensitive layer consistent with the description provided in the specification, such as in the paragraphs beginning on page 40, line 25 and page 52, line 20. The amendments to claim 1 are believed to fully meet the rejection under the second paragraph of 35 U.S.C. §112 by reciting an exposure step and removing the term "presensitized" that was previously used in connection with the exposed plate.

Before addressing the various rejections on prior art grounds set forth in the Official Action, a brief discussion of the background and important aspects of the present invention is believed to be in order. More precisely, as set forth on pages 1 and 2 of the specification, the problems associated with using a developer containing alkaline metal silicates is set forth. While certain attempts have been made to address such problems, such attempts have provided additional disadvantages as described on page 2 of the specification.

The present invention addresses the challenges in the art by providing a method in which a photosensitive layer or thermosensitive layer is provided on an anodized aluminum substrate that has been treated with an aqueous solution comprising at least one compound

selected from the group consisting of nitrite group-containing compound, fluorine atom-containing compound and phosphorous atom-containing compound with the solution essentially comprising a nitrite group-containing compound or fluorine-containing compound. In other words, with respect to the aspect of the invention defined in claim 1, the aqueous solution must contain at least one of the nitrite group-containing compound or fluorine atom-containing compound (although the phosphorous atom-containing compound may additionally be present). Additionally, the treated aluminum substrate has a surface that has certain characteristics defined in the claims determined by X-ray Electron Spectroscopy for Chemical Analysis. Yet further, the defined method requires that the image-wise exposed plate be developed with a developer that contains no silicate.

To illustrate the significant advantages which can be obtained in accordance with the present invention, the Examiner's attention is respectfully directed to the Tables set forth in the specification such as starting on page 90 (with the tests and significance thereof being set forth on pages 88-89). As can be understood therefrom, by following the teachings of the present invention, one can obtain good printing durability and contamination property (i.e., fewer copies with contamination on non-image areas of the plate) without mud or sludge and with only a small differences between reflective optical density of the non-image area at different wavelengths (i.e., smaller RC and RF differences). Of significant interest in considering the Comparative Examples is that when the defined aqueous treatment is not conducted or when a developer containing silicates is used (i.e., Developer B), substantially inferior results are obtained.

Based on the foregoing discussion, the evidence provided in the specification and the claims now of record, applicants respectfully submit that none of the prior art rejections set forth in the Official Action are now applicable. More specifically, Tomita et al., U.S. Patent No. 5,110,710, relates to a light-sensitive lithographic printing plate which includes an aluminum or aluminum alloy support that contains a light-sensitive layer provided thereon. The surface of the support adjacent to the light-sensitive layer is treated by use of an aqueous solution containing at least one selected from the group consisting of nitric acid, nitrate, nitrous acid and nitrite. As noted by the Examiner, the exposed plate is subjected to development using an alkali aqueous solution such as an aqueous solution of sodium silicate, potassium silicate, sodium hydroxide, potassium hydroxide, tribasic sodium phosphate, dibasic sodium phosphate, sodium carbonate, potassium carbonate or the like. In each of the Examples of Tomita et al., the commercial developer SDR-1 is used.

Contrary to the assertion by the Examiner, Tomita et al. does not anticipate any of the claims of record. The developer SDR-1 includes a silicate which is expressly excluded by the claims of record. Moreover, the patent does not recognize the advantages which the present invention can provide, such as a smaller amount of mud and sludge and lower RC and RF differences that are illustrated in the aforementioned Tables in the specification. Thus, not only does Tomita et al. fail to anticipate any of the claims of record, the patent also would not render obvious any aspect of the claims now of record, particularly based on a proper understanding of the present invention and the significant advantages which can be obtained therefrom. Accordingly, applicants respectfully request that this rejection be withdrawn.

Turning to the rejection based on Dhillon et al., U.S. Patent No. 5,834,129, it is noted that the patent describes a grained and anodized aluminum substrate for lithographic printing plates which is then provided with a light-sensitive composition. The Examiner has specifically referred to the description at column 3, lines 1-34 and column 4, lines 26-36.

A careful comparison between the claims now of record and the fair teachings of Dhillon et al. will lead those of ordinary skill in the art to the conclusion that the patent does not disclose or suggest the presently claimed invention. With respect to the description set forth in column 3, it will be appreciated that the discussion therein relates to the anodization step. For instance, the use of sulfuric or phosphoric acid described in the paragraph beginning at column 3, line 21 is for the anodization step itself and does not meet the recitation in the claims of treatment of an anodized aluminum substrate with the defined aqueous solution. As to the use of fluorides described in column 4, it will be recognized that none of the Examples set forth in the patent use anything except polyvinyl phosphonic acid which is used to seal the anodized surface of the aluminum substrate (see column 5, line 9, column 6, lines 13 and 14, column 6, lines 32-33, *etc.*) Therefore, in light of the recitation in claim 1 that the aqueous solution must contain at least one of a nitrite group-containing compound or fluorine atom-containing compound, it is evident that Dhillon et al. does not disclose the presently claimed invention defined in claim 1 and certainly does not provide an appreciation of the advantages which the present invention can obtain that have been illustrated in the numerous Examples and Comparative Examples provided in the specification. As to the new claims, Dhillon et al. does not relate to a

positive-working layer and therefore falls short of being sufficient for meeting this aspect of the present invention as well. Accordingly, each of the claims now of record is believed to be patentable over Dhillon et al.

With respect to the combinations of patents set forth on pages 5-10 of the Action, applicants respectfully submit that such hypothetical combinations would also not lead to the present invention or an appreciation of the results which can be obtained therefrom. In particular, Walls, U.S. Patent No. 4,502,925, relates to the preparation of an aluminum surface that is useful for lithography in which an aluminum sheet is etched in an aqueous bath containing up to about 25% of nitric acid and/or hydrochloric acids and from about 1 to about 25% of an inorganic fluorine-containing acid or salt thereof. The treatments relied on by the Examiner in the Action do not relate to a previously anodized aluminum substrate as required by the claims of record. Thus, even if the teachings of Nakanishi et al., U.S. Patent No. 5,837,425, could be combined with Walls it would still not lead those of ordinary skill in the art to the specific method recited in the claims or an understanding of the advantages which can be obtained therefrom. In this latter respect, it will be noted that the teachings of Nakanishi et al. pertain to those identified in the background of the present application in the first full paragraph on page 2.

Mellan et al., U.S. Patent No. 2,946,683, is even further removed from the present invention since the patent merely describes a hydrophilic coating which adheres to an aluminum base wherein the base plate is treated with an aqueous solution of potassium zirconium fluoride in order to provide what is said to be a permanently hydrophilic coating to which a light-sensitive material such as a diazo resin will adhere. Thus, not only does

Mellan et al. fail to describe the claimed treatment with a defined aqueous solution for a previously anodized aluminum substrate, the patent does not describe anodization of the plate at all. Therefore, even if the patent could somehow be combined with the teachings of Nakanishi et al., it still would not result in any aspect of the presently claimed invention.

As to the combinations of Nakanishi et al. with Tomita et al. and Dhillon et al., both of which have been individually discussed above, such combinations, even if proper, would still not be sufficient to lead to a proper rejection of the claims now of record. As explained above, Tomita et al. actually exemplifies the use of a developer which contains a silicate. Moreover, even when considering the respective disclosures of Tomita et al. and Nakanishi et al. together, those of ordinary skill in the art would still not be lead to an understanding that by following the teachings of the present invention, one can obtain the improvements in mud or sludge and differences in RC and RF noted above. This can be especially appreciated by considering the results from Example 1 and Comparative Example 4 set forth in Table 2 on page 90 wherein the sole difference in the method is using a developer without silicate and one with silicate with the former providing significantly superior results in accordance with the present invention.

Finally, the combination of Dhillon et al. and Nakanishi et al. would also not result in any aspect of the presently claimed invention which now requires in claim 1 that the defined aqueous solution contain at least one of a nitrite group-containing compound or fluorine atom-containing compound which Dhillon et al. does not meet and the teachings of Nakanishi et al. do not remedy. Furthermore, as noted above, Dhillon et al. does not meet the specific recitation of new claim 8 which relates to a positive-working layer which can

be contrasted to the negative-working layer set forth in the patent. Hence, the new claims of record are also patentable over this combination of patents.

For all the reasons set forth above, applicants respectfully submit that the claims now of record clearly and distinctly define the various aspects of the present invention in a manner which is neither anticipated nor rendered obvious by the cited documents, particularly in light of a complete understanding of the present invention and an appreciation of the results set forth in the numerous Examples and Comparative Examples provided in the specification. Accordingly, applicants respectfully request reconsideration and allowance of the present application.

Respectfully submitted,

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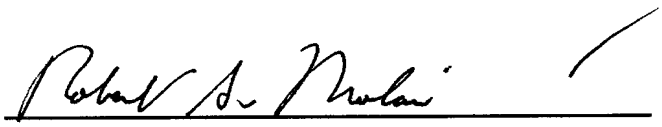
By: 

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